

No. 2016-1013

United States Court of Appeals for the Federal Circuit

COX COMMUNICATIONS, INC., COXCOM, LLC, COX ARKANSAS TELCOM LLC, COX COMMUNICATIONS ARIZONA LLC, COX ARIZONA TELCOM LLC, COX CALIFORNIA TELCOM LLC, COX COMMUNICATIONS CALIFORNIA LLC, COX COLORADO TELCOM LLC, COX CONNECTICUT TELCOM LLC, COX DISTRICT OF COLUMBIA TELCOM LLC, COX FLORIDA TELCOM LP, COX COMMUNICATIONS GEORGIA LLC, COX GEORGIA TELCOM LLC, COX IOWA TELCOM LLC, COX IDAHO TELCOM LLC, COX COMMUNICATIONS KANSAS LLC, COX KANSAS TELCOM LLC, COX COMMUNICATIONS GULF COAST LLC, COX COMMUNICATIONS LOUISIANA LLC, COX LOUISIANA TELCOM LLC, COX MARYLAND TELCOM LLC, COX MISSOURI TELCOM LLC, COX NEBRASKA TELCOM LLC, COX COMMUNICATIONS OMAHA LLC, COX COMMUNICATIONS LAS VEGAS INC., COX NEVADA TELCOM LLC, COX NORTH CAROLINA TELCOM LLC, COX OHIO TELCOM LLC, COX OKLAHOMA TELCOM LLC, COX RHODE ISLAND TELCOM LLC, COX COMMUNICATIONS HAMPTON ROADS, LLC, COX VIRGINIA TELCOM LLC, PLAINTIFFS-APPELLEES

v.

SPRINT COMMUNICATION COMPANY LP, SPRINT SPECTRUM, L.P.,
SPRINT SOLUTIONS, INC., DEFENDANTS-APPELLANTS

and

CISCO SYSTEMS, INC., DEFENDANT

*APPEAL FROM THE UNITED STATES DISTRICT COURT FOR THE DISTRICT OF DELAWARE
CASE NO. 1:12-CV-00487-SLR, JUDGE SUE L. ROBINSON*

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N/A. The real parties in interest are the same as the parties represented.

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Cox Virginia Telcom, LLC is a wholly owned subsidiary of Cox Communications Hampton Roads, LLC. Cox Communications Hampton Roads, LLC is a wholly owned subsidiary of CoxCom, LLC. CoxCom, LLC is a wholly owned subsidiary of Cox Communications, Inc. Cox Communications, Inc. is a subsidiary of Cox Enterprises, Inc. Cox Enterprises, Inc. is a Delaware corporation.

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*No entity owns 10% or more of Cox Enterprises, Inc.'s stock.

4. The names of all law firms and the partners or associates that appeared for the party or amicus now represented by me in the trial court or agency or are expected to appear in this court are:

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Dated: FEBRUARY 17, 2016

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STATEMENT OF RELATED CASES

Pursuant to Circuit Rule 47.5, Plaintiffs-Appellees (“Cox”) state as follows:

- (a) No previous appeal has been taken in this action.
- (b) There are three cases pending in the District of Kansas involving the patents at issue in this appeal. *Sprint Commc’ns Co., L.P., v. Comcast Cable Commc’ns, LLC*, No. 11-2684-JWL (D. Kan.); *Sprint Commc’ns Co., L.P. v. Cable One, Inc.*, No. 11-2685-JWL (D. Kan.); and *Sprint Commc’ns Co., L.P. v. Time Warner Cable Inc.*, No. 11-2686-JWL (D. Kan.). Cisco Systems, Inc. has also filed a declaratory judgment action in the District of Delaware involving these patents. *Cisco Sys., Inc. v. Sprint Commc’ns Co. L.P.*, No. 15-431-SLR (D. Del.).

Although the District of Kansas, in the cases listed above, previously held that the patent claims at issue here are not indefinite (Sprint Br. 1), that court has since stayed those cases—over Sprint’s objection—pending the outcome of this appeal. *Sprint Commc’ns Co. L.P. v. Comcast Cable Commc’ns, LLC*, 2015 WL 5883716, *2 (D. Kan. Oct. 8, 2015). As the court explained, it “cannot necessarily rely on its own prior reasoning to decide whether the Federal Circuit will likely reverse” the judgment in this case, particularly in light of “Federal Circuit opinions issued after th[e] Court’s ruling on the issue of indefiniteness, which the Court therefore could not have considered.” *Id.*

INTRODUCTION

In holding that the “processing system” limitation in Sprint’s patents is a facially indefinite structural limitation described only by its function, the district court correctly followed nearly a century of binding precedent. As early as *Holland Furniture Co. v. Perkins Glue Co.*, 277 U.S. 245, 257-58 (1928), it was “well understood” that any “attempt to describe a patentable device or machine in terms of its function” is “insufficient, and, if allowed, would extend the [patent] monopoly beyond the invention.” That principle governs this case.

Since the district court’s ruling, moreover, the law has only become more established. In *Williamson v. Citrix Online, LLC*, 792 F.3d 1339 (Fed. Cir. 2015) (en banc), this Court powerfully reaffirmed the rule against functional claiming applied below. And in *Media Rights Technologies, Inc. v. Capital One Financial Corp.*, 800 F.3d 1366 (Fed. Cir. 2015), this Court applied that rule to invalidate method claims essentially indistinguishable from Sprint’s. Remarkably, however, Sprint fails even to cite, let alone distinguish, these controlling cases.

Sprint’s patents are a poster child for impermissible functional claiming. As the Supreme Court reaffirmed in *Nautilus, Inc. v. Biosig Instruments, Inc.*, “a patent must be precise enough to afford clear notice of what is claimed, thereby apprising the public of what is still open to them.” 134 S. Ct. 2120, 2129 (2014) (citation omitted). Thus, patent claims may not create “a zone of uncertainty which

enterprise and experimentation may enter only at the risk of infringement claims.” *Id.* (quotation omitted). Yet Sprint cannot answer the most basic question about the scope of its method claims: How can one perform the functions recited in those claims *without* using the “processing system” that supposedly limits them? That failure is fatal, and Sprint’s attempt to brush it off by pointing to the claims’ wholly functional “context” is precisely the argument that *Media Rights* rejected. As Sprint expressly admitted below: “Sprint’s claims do not recite structural limitations for the claimed processing system.” A1398. And because “the claims simply state that the ‘[processing system]’ can perform various functions,” they “cannot ... provide sufficient structure.” *Media Rights*, 800 F.3d at 1372-73.

Equally misguided is Sprint’s plea for de novo review of a battle of experts. For one thing, that battle is irrelevant. The question presented here is a classic claim construction question, and it is readily resolved with the intrinsic evidence. Further, to the extent that expert opinion is informative here, the district court definitively rejected the positions of Sprint’s expert, Dr. Wicker. Citing other patents that do not even use the term “processing system,” Wicker redefined that phrase in a circular fashion—as “a system that processes signaling to assist in call control.” A20. Moreover, far from being “unrebutted” (Br. 45), his opinion was directly countered by Dr. Forsys. And under *Teva Pharmaceuticals USA, Inc. v. Sandoz, Inc.*—another controlling decision that Sprint fails to mention—the district court’s

express reliance on Forys rather than Wicker, “like all other factual determinations, must be reviewed for clear error.” 135 S. Ct. 831, 837-38 (2015). Sprint cannot begin to satisfy that standard.

In a final attempt to save its patents, Sprint recites “columns and columns” of alleged structural content from its specifications in hopes of saving its claims under 35 U.S.C. § 112(f). Br. 35.¹ But this argument is waived—it was not presented below and directly conflicts with Sprint’s judicial admission that a “processing system” is any “device” that can “do what is claimed.” A1448. And in any event, nothing in the specifications comes close to providing the structure that § 112 demands. The disclosures in the specification only add to the *functions* that Sprint’s “processing system” must perform, and never uncover what Sprint purports to have invented. Moreover, even if they did delimit that invention, Sprint’s disclosures would necessarily limit the scope of the claims to “the corresponding structure ... described in the specification.” 35 U.S.C. § 112(f). Yet even now Sprint refuses to accept the unavoidable price of invoking § 112(f).

The judgment of indefiniteness should be affirmed.

¹ As of September 16, 2012, the Leahy-Smith America Invents Act relabeled paragraphs 2 and 6 of 35 U.S.C. § 112, respectively, as subsections (b) and (f). Pub. L. No. 112-29, 125 Stat. 284 (2011). Although Sprint filed its patents before that effective date, we refer, as does Sprint, to the AIA version of § 112.

STATEMENT OF ISSUE

Whether the district court correctly held that Sprint’s patent claims are invalid as indefinite, where (a) each claim requires performing various functions using a “processing system”; (b) the district court found, as a factual matter, that “processing system” has no established meaning in the relevant art; and (c) the specifications describe, at most, a general-purpose computer configured to perform multitudinous functions, but do not disclose an algorithm for performing them.

STATEMENT OF FACTS

Citing only its own brief below, Sprint kicks off its appeal with a tribute to its late inventor, Mr. Joe Christie, and his alleged insight: “using packet networks (such as the Internet) for digital telephone communications.” Br. 7-10. Sprint’s encomium is not relevant to the issues before the Court. Nor is it accurate. The U.S. government developed the technology for connecting circuit- and packet-switched networks as a public good in the 1970s—long before Sprint applied for its patents—as part of the Internet’s precursor, ARPANET. *See* A1408-15. Christie’s patents relate only narrowly to “Voice-over-ATM”—a failed technology that Sprint ultimately abandoned. Sprint’s attempt to recast its patents as covering a public technology that Cox and others successfully commercialized has nothing to do with the dispositive issues on appeal.

Rather, this appeal turns on a simple reality evident on the face of Sprint’s patents. As explained below, all claims of both sets of patents are limited to the use of a “processing system,” which the specifications refer to as either the “CCP” or “CCM.” Both sets of patents teach, as their “fundamental” departure from the prior art, the use of a CCP/CCM—a device that sits outside of a telecommunications switching network and is capable of routing a call from a circuit-switched network across a packet-switched network. The device that performs this function is identified as inventive because it overcomes the problems that supposedly arise when telephone switches are required to handle both the signal that routes a call and the bearer traffic that constitutes the call. Yet while the specifications set forth what the CCP/CCM must *do*, they never disclose what it *is*.

A. Sprint’s “processing system” patents

The patents at issue fall into two groups. Each group shares a specification. Both groups name Christie as the sole inventor.²

1. The Control Patents

The Control Patents—U.S. Patent Nos. 6,452,932, 6,463,052, 6,633,561, and 7,286,561—describe a hybrid telephone network that combines broadband Asynchronous Transfer Mode (“ATM”) packet switches and narrowband Public

² To avoid confusion, we use the group names in the district court’s opinion—*i.e.*, “Control Patents” and “ATM Interworking Patents.” A14. Sprint calls these the “Call Control Patents” and “Broadband System Patents,” respectively. Br. 9-10. The District of Kansas simply numbered them “Group 1” and “Group 2.” A827.

Switched Telephone Network (“PSTN”) circuit switches. A338-59; A310-36; A284-308, A569-90.

Calls are connected between PSTN switches across the ATM network over an ATM virtual circuit selected by a “communication control processor,” or “CCP,” that sits outside of, and controls, the ATM network. The independent claims are claim 1 of the ’932 patent (A358), claim 1 of the ’052 patent (A335), claims 1 and 24 of the ’3,561 patent (A307-08), and claim 11 of the ’6,561 patent (A589). Each claim calls for a “processing system” associated with a packet network to receive a signal from a traditional phone network. The “processing system” “processes” the signal to identify the destination or routing for the call. In most claims, the “processing system” generates an “identifier” or “network code” to designate the exit point from the packet network; and in all claims, the “processing system” generates and transfers a “message”—an “instruction” or “control message”—which causes the call to be routed through the packet network to its destination.

As Sprint notes (Br. 10-11), the Control Patents’ specification describes the claimed “processing system” as a “CCP.” But rather than illuminate what a CCP might be, the specification teaches only that “such systems can be housed in a single device or distributed among several devices.” A303 (13:41-43). The specification gives just one “example of a CCP device”—a “Tandem CLX machine” (*id.*

(13:50-52)), which is a general-purpose computer that was commercially available as of the filing date. But the specification provides no algorithm for programming that computer to perform the functions in the claims.

2. The ATM Interworking Patents

The ATM Interworking Patents—U.S. Patent Nos. 6,298,064 and 6,473,429—describe an attribute of a hybrid ATM-PSTN network similar to the network described above. A392-421; A361-90. They cover an ATM “cross-connect” that works with an ATM interworking unit—also called an ATM “multiplexer”—to convert voice data received from a traditional phone network (known as a time division multiplexed, or “TDM,” network) into data packets called “ATM cells.” The ATM cells are suitable for transfer over an ATM network. As with the Control Patents, the handoff between the traditional and ATM networks is managed by an external controller, the “call/connection manager” or “CCM.” The CCM performs essentially the same functions as the CCP described above. The independent claims are claim 1 of the ’064 patent (A417) and claim 1 of the ’429 patent (A387).

Each claim of the ATM Interworking Patents calls for a “processing system” that performs functions similar to those performed by the Control Patents’ “processing system”: It receives “signaling” or “information” that it “processes” to select an “identifier” or “DS0 connection” to a traditional phone network. The “processing system” then generates and transmits a “message” containing the “identifi-

er” or “DS0 connection” to an interworking unit for conversion and transmission across the ATM packet network.

As Sprint explains, the ATM Interworking specification calls out, as the sole “example” of a “CCM,” a “SPARC station 20”—a general-purpose computer that was commercially available as of the filing date. Br. 13 (citing A411 (12:52-56)). As with the Control specification, however, one searches the ATM Interworking specification in vain for any algorithm for programming that computer to perform the claimed functions of a “processing system.”

B. The alleged “problem” in the prior art

All six patents at issue address the same “problem”: the “limitations” that purportedly arose when the devices making up the “path” over which telecommunications travel must also establish that path, an operation known as “call control.”

As the Control Patents note, Christie’s objective was to create a new “system ... for providing communications control,” which he defined as “the process of setting up a communications path”—*i.e.*, “the selection of network elements ... which will form part of the communications path,” and of “the connections between network elements.” A569 (abst.); A579 (1:37-43). At the time, the most “common method used in communication control [wa]s signaling among the switches” in traditional phone networks. *Id.* (1:56-59). And “while communications control” and the “communications path” were “distinct” concepts, Christie saw a shortcom-

ing: “both [we]re dependent on the switch.” *Id.* (2:53-55). The source of this “dependen[ce] on the switches,” he reasoned, was that the “[s]witches have always been required to [both] physically make connections and provide control over which connections are required.” A588 (20:44-51).

“In prior systems,” Christie explained, “the switches would [1] select the network elements and the connections,” and “[2] actually provid[e] a part of the actual connection.” A582 (8:19-21). As he saw it, the resulting problem was that “prior systems” were “restricted to the communication control capabilities provided by the switches.” *Id.* (8:21-23). “Switch capabilities have not been able to keep up with all of the network possibilities available,” and “[t]he result is a limited system.” A588 (20:50-53). In Christie’s view, the primary “impediments to developing improved networks” were due to “reliance on switches to *both* perform communication control *and* to form *part of the communication path*.” A580 (3:20-22) (emphasis added). He thus perceived “a need for a portion of the communication control processing to be *independent of* the switches that form a part of the communications path.” *Id.* (3:27-30) (emphasis added).

Christie also noted in the ATM Interworking Patents that, to “utilize bandwidth more efficiently” by using “switched virtual circuits” and “switched virtual paths,” prior art systems required “ATM switches” to utilize “both signaling capability and call processing capability.” A375 (1:33-45). Yet doing so “cause[d]

problems because [the switches] must be very sophisticated to support” this functionality. *Id.* (1:45-50). The “generation of sophisticated ATM switches” that can handle both call processing and signaling “[wa]s not yet mature and [was expected to] be expensive when ... first deployed.” *Id.* (1:54-56). Thus, Christie identified the problem he sought to solve much as he did in the Control Patents: “Unfortunately there is not a telecommunications system that can provide ATM switching on a call by call basis without relying on the call processing and signaling capability of an ATM switch.” *Id.* (1:67-2:3).

C. The “solution” claimed in Sprint’s patents

In the “Summary” of his Control Patent invention, Christie proposed “[a]n embodiment of the present invention [that] solves this need by providing a method, system, and apparatus for communication control processing that is located externally to the switches that make the connections.” A580 (3:34-37). To provide this functionality, he stated, “the present invention ... includes a telecommunications *processing system* which comprises an interface that is external to the switches and is operational to receive and transmit signaling.” *Id.* (3:53-56) (emphasis added). In the Control Patents, he called this system the “communication control processor (CCP)” (A585 (13:36-38)) and characterized it as a dramatic improvement over the prior art:

The present invention represents *a fundamental and powerful departure from previous telecommunications technology*. By separating the

communications path from communication control, *the CCP* can utilize different networks and network devices intelligently.

A588 (20:39-44) (emphasis added).

Christie offered the same basic solution in the ATM Interworking Patents. To solve the “[u]nfortunate” lack of “telecommunications system[s] that can provide ATM switching on a call by call basis without relying on the call processing and signaling capability of an ATM switch” (A375 (1:67-2:3)), he proposed a “signaling processor” that would perform a host of functions: It would “receiv[e] the signaling” for a call, “process[] the signaling to select the virtual connection, generat[e] new signaling to identify the particular connection and the selected virtual connection, and then transmit[] the new signaling to [an] ATM interworking multiplexer” (*id.* (2:14-19)).

Christie settled on his signaling processor because, “[i]n this way broadband virtual connections can be provided to narrowband traffic on a call-by-call basis without requiring the call processing and signaling capability of an ATM switch.” *Id.* (2:64-67). The “[s]ignaling processing system” identified as an improvement over switches that combined processing and call control could be “any processing platform that can receive and process signaling to select virtual connections, and then ... transmit signaling to identify selections.” A376 (4:21-24). But the only “signaling processing system” disclosed in the patent was termed a “call/connection manager (CCM).” A377 (5:49, 6:50-51).

The CCP of the Control Patents and the CCM of the ATM Interworking Patents both have two fundamental features. First, the CCP/CCM must be capable of establishing an end-to-end communications path through an entire network on a call-by-call basis. Indeed, the objective of the Control Patents' "system" is "providing communications control," which is "the process of setting up a communications path ... between network elements." A569 (abst.); A579 (1:37-46). That function is performed by "the CCP," which "selects the network elements ... that comprise the communications path." A581 (6:23-25). By performing that routing function, "the CCP can ... make the call connection from origination to destination." A589 (21:8-10).

The "CCM" likewise "provides a routing and management function for the signaling system at large," and "controls the connection and switching requirements for the calls." A379 (10:56); A380 (11:8-9, 11:45-46). The CCM can set "connections through an ATM" network "on a call-by-call basis." A361 (abst.). "[W]hen a user places the call," the CCM "send[s] signaling for the call to the telecommunications system and ... transmit[s] user information to the telecommunications system over a particular connection." A375 (2:5-11). "The invention"—the "CCM"—thus "allows switching over an ATM fabric on a call by call basis." A387 (25:20-21).

Second, the CCP/CCM must be able to provide that end-to-end, call-by-call routing functionality from *outside* the network path. As the Control Patents assert, “the CCP allows a telecommunications network to *separate* communication control from the communications path.” A582 (8:17-19) (emphasis added); *see* A588 (20:27-31). “By using the CCP, telecommunications systems can control communications *independently* of the capability of the switches” that make up the path. A582 (8:28-31) (emphasis added).

To Christie, this ability to “*separate* the communications path from communication control” by using a CCP was his “invention[’s] *fundamental* and powerful departure from” the prior art. A588 (20:40-44) (emphasis added). During prosecution, Sprint overcame obviousness rejections over systems in the prior art that “place[d] the entire server architecture into communication switch[es]” by arguing: “This is just the complexity that the [claimed] invention[] seeks to avoid.” A749. It is only by this “fundamental” separation that “the CCP” is able to “utilize different networks and network devices intelligently.” A588 (20:42-44). Mr. Christie’s “invention” thus purports to “solve[] th[e] need” discussed above by using a novel device located “*externally* to the switches that make the connections”—*i.e.*, the CCP. A580 (3:34-37) (emphasis added); *see* A588 (20:29-33).

The ATM Interworking Patents likewise stress that separation from the network path is a fundamental feature of what is claimed. As those patents explain, a

key “[a]dvantage[.]” of the CCM “invention” is that it “does not require call processing capability in an ATM switch,” and therefore “enables networks to implement ATM switching without” them. A387 (25:20-28). Indeed, as noted above, the “signaling processing system” of “the invention”—of which the CCM is the sole disclosed embodiment—is proposed precisely in order to solve the problems that arise when switches serve both as elements in a call path and as the call control intelligence for the network. *See* A375 (2:5-67). Thus, as with the CCP, a central characteristic of the invention—the CCM—is that it is not a part of, but rather is separated from, the previously known devices that made up the telecommunications path.

D. Proceedings below

Before the district court, Sprint put all its chips on its infringement case, opting to argue for the broadest possible claim scope, and refusing to contemplate any effective boundaries on the “processing system” limitation. Thus, Sprint did not make the detailed arguments about structure that it makes now. Instead, despite the patents’ repeated emphasis on the alleged novelty of the CCP/CCM, Sprint argued that “the invention found in the claims at issue is *not* a CCM/CCP device,” but merely “the method steps recited in the claim directed to achieve an outcome,” without regard to the particular device that is used to achieve it. A951 (emphasis added). “To reduce a method claim term to a representative device,” Sprint ar-

gued, “would improperly mischaracterize the subject matter of the claim and impermissibly limit its scope.” *Id.*

At the *Markman* hearing before the district court, Sprint thus flatly admitted—indeed, urged—that, “as a practical matter, there probably are not” any “reasonable limits in the field” to the claimed “processing system,” beyond acknowledging that “no one is going to argue that you could perform the functions that are recited in your head.” A1451. That is, “the distinction between a human doing the [claimed] function, doing the processing in their head, so to speak, and the device” processing to perform the claimed functions, is the only “real limitation” of the claims. A1465. That is why “the actual structural aspects of the processing system itself are not recited in the claims”; we know only that “[i]t obviously has to be a computer device.” A1445. Thus, Sprint’s only definition of “processing system” was that “[i]t has to be this device that sits in a network that is programmed to do what is claimed.” A1448.

In rejecting Sprint’s attempt to claim any conceivable, non-human “system” that performs the claimed “processing” functions, Judge Robinson carefully considered the intrinsic and extrinsic evidence presented—including each side’s expert testimony. The court acknowledged what “Sprint’s expert [Dr. Wicker] explained” about the supposedly “‘understood meaning [of ‘processing system’] in the telecommunications industry by a person of ordinary skill in the art,’” as well as his

“opin[ion] that the Sprint patents reference other patents which use the phrase ‘processing system,’ demonstrating that a person of ordinary skill in the art would have known with reasonable certainty what is meant by the limitation.” A15-16.

At the same time, however, the court considered that “an expert for Comcast”—Dr. Leonard Forys, whose testimony was first offered in a related case against Comcast and submitted by Cox with its claim construction briefing—“disagreed with Sprint’s expert and opined that there is no ‘known, well-understood meaning’ of processing system.” A16 (quoting A1381). The court continued: “Comcast’s expert selected five patents (of the twenty five identified by Sprint’s expert as using ‘processing system’ in their claims) and explained that ‘the phrase is used differently in each of the [five] patents [he] sampled, with different structures: at the very least the processors involved have specialized software to perform their widely differing functions.’” *Id.* (quoting A1383).

After weighing each side’s expert testimony, “the court conclude[d] that there is no ‘established meaning in the art’ for the disputed limitation.” A19. In so doing, the court rejected the evidence “cited by Sprint’s expert”—including patents allegedly illuminating the scope of “processing system.” *Id.* “As explained by Comcast’s expert,” the court continued, “the limitation ‘processing system’ is used differently in a sampling of other patents.” *Id.*; *see* A1381-83.

The district court also rejected Sprint’s expert’s alternative “construction of ‘a system that processes signaling to assist in call control,’” because it merely “describes the ‘processing system’ by its function.” A20. Similarly, the court explained that “Sprint’s argument that any system performing the steps of the method infringes”—the argument that Sprint advanced at the *Markman* hearing below—“offers no ‘objective boundaries’ for those skilled in the art to determine the scope of the invention.” *Id.* Having “conclude[d] that the claim language and the specification do not provide structural limitations for the ‘processing system’ and do not inform those skilled in the art about the scope of the invention with reasonable certainty,” the court held that “[t]he limitation is indefinite” and entered partial summary judgment for Cox. *Id.*

Pursuant to Federal Rule of Civil Procedure 54(b), Judge Robinson later entered final judgment as to Sprint’s claims based on the Control and ATM Interworking Patents. A1-2. That is the judgment from which Sprint appeals.

E. Judge Lungstrum’s opinions

As Sprint explains, Judge Lungstrum of the District of Kansas previously adopted Sprint’s position, denying summary judgment motions by other defendants, and presiding over Sprint’s victory in a 2007 trial on the merits involving most of the claims at issue here. Br. 16.

In three cases contemporaneous with this one and relating to other cable company telecommunications providers, Judge Lungstrum initially endorsed Sprint's position yet again, and rejected the defendants' argument that the "processing system" limitations are indefinite. Br. 16-17.

After Judge Robinson's ruling in this case, however, Judge Lungstrum stayed those cases, acknowledging that a reasonable question existed as to the correctness of his indefiniteness ruling. As he explained: "[T]his Court cannot necessarily rely on its own prior reasoning" in light of the "Federal Circuit opinions issued after this Court's ruling on the issue of indefiniteness, which this Court therefore could not have considered." *Comcast*, 2015 WL 5883716, *2.

SUMMARY OF ARGUMENT

A. It has long been "well understood" that "attempt[s] to describe a patentable device or machine in terms of its function" are "insufficient, and, if allowed, would extend the [patent] monopoly beyond the invention." *Holland Furniture Co. v. Perkins Glue Co.*, 277 U.S. 245, 257-58 (1928). *Nautilus* bolstered that prohibition by raising the bar for patent definiteness and holding that claims are indefinite unless they "inform those skilled in the art about the scope of the invention with reasonable certainty," thereby "apprising the public of what is still open to them." 134 S. Ct. at 2129 (quotation omitted). A structural limitation defined only by its function fails this standard because it purports to cover every possible means

of performing the function—leaving nothing “open” to the public. And here, Sprint has proudly trumpeted the fact that “[its] claims do not recite structural limitations for the claimed processing system.” A1398.

The only exception to the rule against functional claiming is § 112(f), which provides that a limitation “may be expressed as a means ... for performing a specified function without the recital of structure” in the claim itself, but only so long as there is “corresponding structure ... described in the specification.”

Since the judgment below, this Court has issued two critical decisions that further strengthen the rule against functional claiming and clarify its relationship to § 112(f). First, sitting en banc in *Williamson*, the Court eliminated a previously “strong” presumption against analyzing “[g]eneric terms such as ‘mechanism,’ ‘element,’ ‘device,’ and other nonce words that reflect nothing more than verbal constructs ... [a]s tantamount to using the word ‘means’” under § 112(f). 792 F.3d at 1349-50 (quotation omitted). Such terms, the Court reaffirmed, “do not connote sufficiently definite structure.” *Id.* at 1350. Second, the Court applied that reasoning in *Media Rights* to a structural limitation in a method claim, holding it indefinite because it “fail[ed] to provide sufficient structure.” 800 F.3d at 1373.

B. Here, the district court correctly held that Sprint’s claims require the use of a “processing system” described only by its function—and thus are indefinite.

A20. That conclusion was already clear under *Holland* and *Nautilus*. Under *Williamson* and *Media Rights*, it is an open-and-shut case.

B.1. Sprint attacks that conclusion by arguing that “the scope of processing system is reasonably certain from the context of the claims.” Br. 23. But Sprint does not actually contend that the *structure* of the “processing system” is “reasonably certain.” Nor could it. As Sprint has repeatedly admitted, “the actual structural aspects of the processing system itself are not recited in the claims.” A1445 (hearing); *accord* A1398 (briefing).

Rather, Sprint’s argument is that “the scope of ‘processing system’ is bounded by the *function* it performs in these claims.” Br. 26 (emphasis added). And to be sure, functional disclosure is *relevant*; it delimits the *use* of a recited structural element (though not the structure itself). But after *Media Rights*, the notion that function can entirely replace structure is not even colorable: That “the claims simply state that [a structural limitation] can perform various functions” is no “substitute for ... a definite structure” to perform them. 800 F.3d at 1372.

B.2. Facing difficulties on the law, Sprint turns to challenging facts—namely, the district court’s finding that “processing system,” a quintessential nonce term, has “no established meaning in the art.” A19. In support, Sprint cites its expert, Dr. Wicker, who opined that two prior patents “used the term ‘processing system’ in a manner consistent with the usage of this term in Sprint’s patents.” Br. 37.

But as the district court found, those patents refer to a different system—a “*call processing system*”—and “structurally describe[]” that system in ways that are neither found in, nor consistent with, Sprint’s functional disclosures. A19.

Nevertheless, Sprint insists that the district court should have credited Wicker’s opinions over those of Dr. Forys, whom the court relied on to find that “the limitation ‘processing system’ is used differently in a sampling of other patents.” *Id.*; see A1381-83. Sprint does not even attempt to show that the district court clearly erred—the standard under *Teva*. Sprint merely disagrees with the court’s decision to favor Forys, which is not a basis for reversal. Indeed, even accepting Wicker’s opinions would not compel a different conclusion. He defined “processing system” circularly as “a system that processes signaling to assist in call control.” Br. 42; A992. As the district court explained, that definition does not help; it simply “describes the ‘processing system’ by its function.” A20.

Because Sprint offered no structural definition of “processing system,” the district court looked for one and, of course, found none. A19. Sprint says the court erred by citing “computer science” dictionaries (Br. 46), but Sprint itself characterized the relevant art as a “computer-implemented field.” A1438-40. On appeal, Sprint proposes that the Court take judicial notice of a dictionary definition it never cited below. Even now, however, Sprint cites no definition of the claimed “processing system” apparatus. Rather, Sprint cites a definition for the *function* of

“call processing” (Br. 47)—which simply confirms that the actual limitation in the claims is a nonce term for a structure (“system”) modified by a purely functional descriptor (“[call] processing”).

C. Unable to find any structural definition of “processing system” in either the claims or the art, Sprint turns to the specifications, which according to Sprint are “replete with structural details and flow charts about the processing system.” Br. 57. For three reasons, this argument lacks merit.

First, Sprint not only waived this point below, but affirmatively disclaimed it. As the district court noted (A20 n.9), Sprint resisted construing “processing system” under § 112(f), which allows patentees to rehabilitate structurally indefinite terms by limiting them to “corresponding structure ... described in the specification.” But instead of tying the “processing system” to the specifications, Sprint took the extreme position that its claims cover any “device that sits in a network that is programmed to do what is claimed.” A1448. That admission is fatal.

Second, waiver and disclaimers aside, Sprint fails to cite any structure for performing the claimed functions. In fact, Sprint admits that the specifications “mirror[] the context of the claims,” and thus merely “discuss[] [various] call processing functions.” Br. 29, 33. The only *structural* disclosures that Sprint points to are the “examples” of “a Tandem CLX machine” in the Control Patents, and a “SPARC station 20” in the ATM Interworking Patents. Br. 32, 36. Yet because

these “general purpose computers can be programmed to perform very different tasks in very different ways,” their disclosure alone “does not limit the scope of the claim.” *Aristocrat Techs. Austl. Pty. Ltd. v. Int’l Game Tech.*, 521 F.3d 1328, 1333 (Fed. Cir. 2008). Rather, patentees must also disclose the “particular algorithm to perform the claimed function.” *Id.* at 1334. Sprint failed to do so, and its attempt to skirt that requirement “is contrary to this court’s law.” *Id.*

Third, by resorting to the specifications’ disclosures, Sprint tries to “avail itself of the *benefits* of Section 112(f),” while refusing to take on “the *burden*” (Br. 55)—*i.e.*, limiting the scope of its claims to whatever structures are actually disclosed. But Sprint cannot have it both ways. “[L]imitation of the claim to the means specified in the written description” is “[t]he price that must be paid for use of [§ 112(f)].” *Med. Instrumentation & Diagnostics Corp. v. Elekta AB*, 344 F.3d 1205, 1211 (Fed. Cir. 2003) (quotation omitted). Thus, even if Sprint’s specifications disclosed sufficient structure (and they do not), any such structure would necessarily limit the scope of the claims.

The judgment should be affirmed.

STANDARD OF REVIEW

Citing law that predates the Supreme Court’s 2015 decision in *Teva*, Sprint asserts that this appeal is subject only to de novo review. Br. 23. Not so.

To be sure, this Court “review[s] the district court’s ultimate conclusion of indefiniteness under 35 U.S.C. § 112 de novo.” *Eon Corp. IP Holdings LLC v. AT&T Mobility LLC*, 785 F.3d 616, 620 (Fed. Cir. 2015). “Because the indefiniteness inquiry here is intertwined with claim construction,” however, the Court reviews any “subsidiary factual determinations for clear error.” *Id.* (affirming summary judgment of indefiniteness) (citing *Teva*, 135 S. Ct. at 836). Thus, unless the Court has “a definite and firm conviction that a mistake has been committed,” such “factual findings ... are not to be disturbed.” *Flex-Rest, LLC v. Steelcase, Inc.*, 455 F.3d 1351, 1357 (Fed. Cir. 2006) (quotation omitted).

ARGUMENT

The district court correctly applied longstanding binding precedent—recently reinforced by this Court—in holding that Sprint’s “processing system” claims are indefinite.

As this Court recently reaffirmed, structural limitations described only by their function have long been indefinite. Part A, *infra*. The district court rightly determined that the claimed “processing system” is a functionally described nonce term, and its decision to credit Cox’s expert testimony over Sprint’s was not clearly erroneous. Part B, *infra*. Sprint’s attempt to link the “processing system” to general-purpose computers disclosed in the specifications is not only waived, but unconvincing on the merits. Part C, *infra*.

A. Under both longstanding and intervening precedent, putatively structural claim limitations that are described only by their function are fatally indefinite.

1. Patent claims that purport to impose structural limitations using functional language have long been invalid for indefiniteness. As early as the Supreme Court’s decision in *Holland Furniture*, it was “well understood” that any “attempt to describe a patentable device or machine in terms of its function” is “insufficient, and, if allowed, would extend the [patent] monopoly beyond the invention.” 277 U.S. 257-58 (citing *O’Reilly v. Morse*, 56 U.S. 62, 113 (1853), and *Risdon Iron & Locomotive Works v. Medart*, 158 U.S. 68, 77 (1895)).

Later Supreme Court cases reaffirm “that a patentee may not broaden his product claims by describing” his claimed invention, “to the exclusion of any structural definition,” “in terms of function.” *Gen. Elec. Co. v. Wabash Appliance Corp.*, 304 U.S. 364, 371 (1938). Claims that provide only “suggestions of the functions of the [claimed] product ... fall afoul of th[at] rule,” which stems from § 112(b)’s “requirement of particularity and distinctness.” *United Carbon Co. v. Binney & Smith Co.*, 317 U.S. 228, 234, 236 (1942). In short, such claims fail “clearly [to] circumscribe what is foreclosed from future enterprise.” *Id.*

Applying these decisions, this Court has likewise barred “purely functional claiming” for “fail[ing] to fulfill [§ 112(b)’s] ‘public notice function’ ... by ‘particularly pointing out and distinctly claiming’ the invention.” *In re Katz Interac-*

tive Call Processing Patent Litig., 639 F.3d 1303, 1315-16 (Fed. Cir. 2011). Indeed, even before the Supreme Court’s decision in *Nautilus*—when claims were indefinite only if “insolubly ambiguous”—functional claims “without ... corresponding structure” were “indefinite.” *Halliburton Energy Servs., Inc. v. M-I LLC*, 514 F.3d 1244, 1249 (Fed. Cir. 2008).

2. By imposing a much stricter definiteness standard, *Nautilus* underscored the continued vitality of this rule. As the Supreme Court there explained, § 112(b) “require[s] that a patent’s claims ... inform those skilled in the art about the scope of the invention with reasonable certainty.” 134 S. Ct. at 2129. That is, “a patent must be precise enough to afford clear notice of what is claimed, thereby *apprising the public of what is still open to them.*” *Id.* (quotation omitted; emphasis added). “The limits of a patent,” the Court continued, “must be known for the protection of the patentee, the encouragement of the inventive genius of others and the assurance that the subject of the patent will be dedicated ultimately to the public.” *Id.* at 2129 n.6 (quoting *Wabash*, 304 U.S. at 369).

Simply put, “[a patent] monopoly is a property right,” and, “like any property right, its boundaries should be clear.” *Id.* at 2124 (quotations omitted). While “absolute precision is unattainable,” the law does not permit “[a] zone of uncertainty which enterprise and experimentation may enter only at the risk of infringement claims.” *Id.* at 2129 (quoting *United Carbon*, 317 U.S. at 236).

3. The rule against functionally claiming a structural limitation has just one “limited exception.” *Function Media, L.L.C. v. Google, Inc.*, 708 F.3d 1310, 1317 (Fed. Cir. 2013). If the term is construed as a “means-plus-function” limitation under § 112(f), its validity can be saved, but *only* if the patent’s specification “contain[s] sufficient descriptive text” for an ordinarily skilled artisan to “know and understand what structure corresponds to the means limitation.” *Id.* (citations omitted). Thus, although Congress has “authorized functional claiming,” it has done so “with limits.” *Halliburton*, 514 F.3d at 1256 n.7.

As the full Court has held, “if one employs means-plus-function” claiming, any failure to “set forth in the specification an adequate disclosure showing what is meant by that language” is a “fail[ure] to particularly point out and distinctly claim the invention.” *In re Donaldson Co.*, 16 F.3d 1189, 1195 (Fed. Cir. 1994) (en banc). In return “for allowing the patentee to claim [a structure] in terms of function,” it is “[t]he duty of a patentee to clearly link or associate structure” in the specification “with the claimed function”—that “price ... must be paid.” *Med. Instrumentation*, 344 F.3d at 1211 (quotation omitted).

4. This Court’s recent cases, which Sprint fails even to mention, further support this point. As *Williamson* held, there is no “strong” presumption against imposing on patentees the duty to support functional claiming with structural disclosures—even for claims that are not drafted in “means-plus-function” format.

792 F.3d at 1349 (en banc). Rather, “[g]eneric terms such as ‘mechanism,’ ‘element,’ ‘device,’ and other nonce words that reflect nothing more than verbal constructs may be used in a claim in a manner that is tantamount to using the word ‘means’ because they typically do not connote sufficiently definite structure.” *Id.* at 1350 (quotation omitted). Thus, the Court in *Williamson* held that the claim term “‘distributed learning control module’” was facially indefinite, because “[t]hese words do not describe a sufficiently definite structure.” *Id.* at 1351.

In *Media Rights*, this Court confirmed that the logic of *Williamson* applies equally to method claims. The claim at issue there called for “[a] method of preventing unauthorized recording of electronic media comprising” various steps including the use of a particular structure—a “compliance mechanism.” 800 F.3d at 1368-69. The problem was, the term “‘compliance mechanism’ ha[d] no commonly understood meaning and [wa]s not generally viewed by one skilled in the art to connote a particular structure.” *Id.* at 1372. And because “the specification fail[ed] to disclose sufficient structure” to save the claims under § 112(f), the Court concluded that “this term is indefinite.” *Id.* at 1375.

B. Sprint’s claimed “processing system” is described only by its function, and is therefore facially indefinite as a matter of law.

Following this precedent, the district court correctly rejected Sprint’s argument that “processing system” has a “plain and ordinary meaning.” A15. As the court explained, “processing system” is only “functionally described by the claims

and in the specifications,” and it follows that Sprint’s claims “do not pass muster under *Nautilus* as a person of ordinary skill in the art is not provided with the bounds of the claimed invention.” A18-19. Likewise, “Sprint’s [alternative] proposed construction of ‘a system that processes signaling to assist in call control’ describes the ‘processing system’ by its function,” and thus cannot rescue the term from indefiniteness. A20. Sprint cannot show any error in that analysis—let alone without even engaging the most relevant precedent.

1. Contrary to Sprint’s arguments, the wholly functional “context” of its claims only underscores their opacity.

a. Sprint’s main argument for reversal is that “the scope of processing system is reasonably certain from the context of the claims.” Br. 23. Sprint contends that the claims “recite method steps for setting up telephone calls, and clearly recite the role of a ‘processing system’ in that method.” Br. 25. Thus, in Sprint’s view, the term “processing system” is definite because “the scope of ‘processing system’ is bounded by the function it performs in these claims.” Br. 26. Yet this Court—mostly recently in *Media Rights*—has rejected Sprint’s exact argument.

There, as here, “the parties also agree[d] that the claim language recite[d] functions for the [disputed] ‘compliance mechanism’ term.” 800 F.3d at 1372. As the Court explained, however, the fact that “the claims simply state that the ‘compliance mechanism’ can perform various functions” is no “substitute for ... a definite structure.” *Id.* It was immaterial that the patent described “what processes the

‘compliance mechanism’ performs,” or even “how the ‘compliance mechanism’ is connected to and interacts with the other components of the system.” *Id.* at 1373. That functional context “alone was not sufficient” to satisfy § 112. *Id.* And “[w]ithout more,” the Court could not “find that the claims ... provide sufficient structure for the ‘compliance mechanism’ term.” *Id.*

Sprint’s claims suffer from the same defect. As Sprint conceded in its briefing below, “Sprint’s claims do not recite structural limitations for the claimed processing system.” A1398; *accord* A1445 (*Markman* hearing) (“the actual structural aspects of the processing system itself are not recited in the claims”). Instead, as with the “illustrative” claim in *Media Rights*, Sprint’s “exemplary claim” here (Br. 26) “simply state[s] that the [‘processing system’] can perform various functions.” 800 F.3d at 1372. And as in *Media Rights*, the recited functions in Sprint’s claims—italicized below—reveal nothing about the *structure* of the disputed term:

“[I]llustrative” claim in <i>Media Rights</i> , 800 F.3d at 1368-69	“[E]xemplary claim 1 of [Sprint’s] ’932 patent” (Br. 26; A358)
<p>A method of preventing unauthorized recording of electronic media comprising:</p> <p><i>Activating a compliance mechanism in response to receiving media content by a client system, said compliance mechanism coupled to said client system, said client system having a media content presentation application operable thereon and coupled to said com-</i></p>	<p>A method for handling a call having a first message and communications, the method comprising:</p> <p><i>receiving and processing the first message in a processing system external to narrowband switches to select one of the narrowband switches;</i></p> <p><i>generating a second message in the processing system based on the se-</i></p>

<p>pliance mechanism;</p> <p><i>Controlling</i> a data output pathway of said client system with said compliance mechanism by <i>diverting</i> a commonly used data pathway of said media player application to a controlled data pathway <i>monitored</i> by said compliance mechanism; and</p> <p><i>Directing</i> said media content to a custom media device coupled to said compliance mechanism via said data output path, for selectively <i>restricting</i> output of said media content.</p>	<p>lected narrowband switch and <i>transmitting</i> the second message from the processing system; and</p> <p><i>receiving</i> the second message and the communications in an asynchronous communication system and <i>transferring</i> the communications to the selected narrowband switch in response to the second message.</p>
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Sprint’s argument that “the scope of ‘processing system’ is bounded by the function it performs in these claims” (Br. 26) thus fails as a matter of law. Indeed, if that is the only way in which the term is “bounded,” then the claims would be no different in scope if “processing system” were replaced with “thing” or “means for.” That is the epitome of improper functional claiming: A limitation “cannot be construed so broadly [as] to cover every conceivable way or means to perform [a] function.” *Mas-Hamilton Grp. v. LaGard, Inc.*, 156 F.3d 1206, 1214 (Fed. Cir. 1998). Because “the other words [in the claims] do nothing more than identify functions for the ‘[processing system]’ to perform,” they cannot rehabilitate that “non-structural, ‘nonce’” term. *Robert Bosch, LLC v. Snap-On Inc.*, 769 F.3d 1094, 1099 (Fed. Cir. 2014).

b. *Personalized Media Communications, L.L.C. v. ITC*, 161 F.3d 696 (Fed. Cir. 1998), on which Sprint heavily relies (Br. 50-51), does not change the result. Below, Sprint cited *Personalized Media* once, in a footnote, to argue that “recitation of any sufficient structure to perform the stated function precludes the application of § 112(f).” A938 & n.25. Now, Sprint cites *Personalized Media* for the more extreme (and incorrect) view that a structural limitation’s “functional definition” is never “grounds for indefiniteness.” Br. 50. Sprint is mistaken.

For starters, *Personalized Media* relied on presumptions about § 112(f) that the en banc portion of *Williamson* overruled. See 792 F.3d at 1348-49 (citing *Personalized Media*). But in any event, nothing in *Personalized Media* suggests that a definite structural limitation can consist of purely functional language. On the contrary, in holding that “digital detector” was definite, the Court relied on “dictionary definitions” teaching that “‘detector’ had a well-known meaning to those of skill in the electrical arts connotative of structure, including a rectifier or demodulator,” and thus “convey[ed] to one knowledgeable in the art a variety of structures known as ‘detectors.’” 161 F.3d at 704-05.

Sprint compares the district court’s reasoning here to the ITC’s reasoning in *Personalized Media*, but the analysis there “centered around the ambiguity raised by the ... adjectival qualification (‘digital’) placed upon otherwise sufficiently definite structure (‘detector’).” *Id.* at 705. The ITC erred in assuming that the adject-

tive “digital” could “make the sufficiency of [the ‘detector’] structure any less sufficient,” when in fact “[t]he use of the word ‘digital’ in conjunction with the word ‘detector’ merely place[d] an additional functional constraint (extraction of digital information) on a structure (detector) otherwise adequately defined.” *Id.*

Unlike “detector,” however, “system” is a paradigmatic nonce word that conveys no structure, and tacking on the functional descriptor “processing” does not change “system” from a nonstructural term to a structural one. Indeed, that was precisely the problem in *Media Rights*: “[This Court] ha[s] never found that the term ‘mechanism’—without more—connotes an identifiable structure; certainly, merely adding the modifier ‘compliance’ to that term would not do so either.” *Media Rights*, 800 F.3d at 1373. “Processing system” is no different.

In fact, at least two federal district courts already have relied on *Williamson* in holding that “system,” no less than “module,” is a “nonce word.” *Verint Sys. Inc. v. Red Box Recorders Ltd.*, 2016 WL 54688, *11 (S.D.N.Y. Jan. 4, 2016); *Joao Control & Monitoring Sys., LLC v. Protect Am., Inc.*, 2015 WL 4937464, *5 (W.D. Tex. Aug. 18, 2015). Last month in *Red Box Recorders*, for example, the court held indefinite the term “communication monitoring system.” 2016 WL 54688, *11. As the court recognized, “[t]he term ‘system,’ although qualified as a ‘communication monitoring system,’ does not impart a sufficient structure. ‘System’ standing alone is a nonce word that does not describe a structure that could

perform the listed functions and the modifier ‘communication monitoring’ provides a functional description of the system but no structure.” *Id.* (footnote omitted). Similarly, the court in *Joao Control* held that the term “system,” “as used in the claim[ed ‘detecting system’], functions merely as a nonce word or a verbal construct that is not recognized as the name of structure and is simply a substitute for the term ‘means for.’” 2015 WL 4937464, *5 (quotation omitted). The same is true of “processing system” here.

Sprint’s analogy to the “datalink” limitation upheld in *Hill-Rom Services, Inc. v. Stryker Corp.*, 755 F.3d 1367 (Fed. Cir. 2014) (Br. 53), fails for the same reason. Naturally, definite structures sometimes happen to be *named* after their functions, “such as ‘filter,’ ‘brake,’ ‘clamp,’ ‘screwdriver,’ or ‘lock.’” 755 F.3d at 1374-75. But unlike those commonplace terms, which convey both function *and* structure, “system” is merely a placeholder for structure. Unlike Sprint, moreover, the patentee in *Hill-Rom* did not contend that “datalink” could be *any* conceivable device that “links” “data.” Rather, the parties disputed more narrowly whether the term “encompasses both wired and wireless connections.” *Id.* at 1371. That is a far cry from Sprint’s view that, “as a practical matter, there probably are not” any “reasonable limits” on what a “processing system” might be. A1451.

c. Citing this Court’s decision on remand in “*Nautilus III*,” Sprint also contends that the district court failed to recognize that functional disclosure is “highly

relevant.” Br. 25, 51; *Biosig Instruments, Inc. v. Nautilus, Inc.*, 783 F.3d 1374, 1383 (Fed. Cir. 2015). That is a red herring. The district court did not say that function is “irrelevant” (and neither do we). Br. 25. In fact, the district court quoted *Nautilus III* in explaining that “when a claim limitation is defined in ‘purely functional terms,’ a determination of whether the limitation is sufficiently definite is ‘highly dependent on context (*e.g.*, the disclosure in the specification and the knowledge of a person of ordinary skill in the relevant art area).” A17 (quoting 783 F.3d at 1378). Yet just because functional disclosure is *relevant* (in that it delimits the scope of the claimed use of a recited structural element) does not make function a *substitute* for structure.

In arguing otherwise, Sprint crops a quotation from *Cochrane v. Deener*, 94 U.S. 780 (1876), to suggest that method claims universally encompass all structures that can be used to perform their recited functions (Br. 27)—omitting that decision’s caveat that this is so only “if the patent is not confined to [a] particular tool or machine.” 94 U.S. at 787-88. Sprint forgets that its claims here *are* “confined”: For whatever reason, Sprint chose not to seek unbounded method claims. Sprint chose to limit infringement to methods performed using a “processing system,” and the district court rightly rejected Sprint’s attempt to write that limitation out of the claims.

Sprint nevertheless insists that the district court erred in relying on *Microprocessor Enhancement Corp. v. Texas Instruments, Inc.*, 520 F.3d 1367 (Fed. Cir. 2008), to conclude that “processing system” is a “structural limitation” on the claimed methods. Br. 54-55. Yet *Microprocessor* plainly held that “[m]ethod claim preambles often recite the physical structures of a system in which the claimed method is practiced”—and when they do, “infringement of [the] claim ... is clearly limited to practicing the claimed method in [the recited] processor possessing the requisite structure.” 520 F.3d 1367, 1374-75 (Fed. Cir. 2008). Moreover, *Media Rights* further confirmed that a physical structure recited in a method claim “is a limitation”; thus, if it “lacks sufficient structure,” the claim is “invalid for indefiniteness.” 800 F.3d at 1368; *accord Katz*, 639 F.3d at 1318 (where “a method claim ... recite[s] structural elements,” it is infringed only “upon practicing the claimed method in a processor with the required structural limitations”).

d. Finally, Sprint invokes Judge Lungstrum’s reasoning that “method claims” need only be “limited by the functions that must be performed by the processing system.” Br. 27 (quoting *Sprint Commc’ns Co. v. Comcast Cable Commc’ns, LLC*, 2014 WL 5089402, *6 (D. Kan. Oct. 9, 2014)). Again, however, that logic is contrary to this Court’s intervening decision in *Media Rights*, which held indefinite a structural limitation in a method claim described only by its function. Indeed, even Judge Lungstrum has recognized that Sprint “cannot necessarily

rely on [his] own prior reasoning” in light of the “Federal Circuit opinions issued after [his] ruling on the issue of indefiniteness [*i.e.*, *Media Rights and Williamson*], which [he] therefore could not have considered.” *Comcast*, 2015 WL 5883716, *2.

2. This Court should defer to the district court’s correct factual finding that “processing system” has no established meaning in the relevant art.

Sprint also challenges the district court’s factual finding that “processing system” has “no established meaning in the art.” A19. Yet Sprint cannot show—indeed, it does not even suggest—that this finding is clearly erroneous under *Teva*. And having ignored the governing standard, Sprint cannot hope to make the case for reversal.

a. Instead, Sprint says the district court “minimiz[ed] the legal importance” of the ’850 and ’343 patents, which were cited during prosecution, by labeling them “extrinsic evidence.” Br. 39. Not so. For one thing, the court was plainly (and correctly) referring to testimony “by Sprint’s expert” as “extrinsic.” A19. And in any event, the court rightly observed that both patents refer to the phrase “*call* processing”—not the term “processing system”—and include explicit structural descriptions that are absent from Sprint’s patents. *Id.* Sprint’s bald assertion that the court “fail[ed] to consider the cited intrinsic art” (Br. 39) therefore lacks merit. And even if the court “misclassified” intrinsic evidence as extrinsic (and it

did not), “the use of such terminology is harmless error.” *Kozak v. DHHS*, 78 F. App’x 129, 132 (Fed. Cir. 2003) (quotation omitted).

In any event, even if the ’850 and ’343 patents related generically to “processing systems,” they would only confirm that the term has no uniform meaning. Sprint cites no evidence that the “system” it depicts from the ’343 patent (Br. 38) performs the functions claimed in its patents. (If it did, the ’343 patent would anticipate the claims.) And as a legal matter, “the same claim term” may have “different meanings in different patents,” “depending on the specifics of each.” *Mon-santo Co. v. Bayer Bioscience N.V.*, 363 F.3d 1235, 1244 (Fed. Cir. 2004). Thus, “the manner in which [a] term is used” in one patent cannot be used to define “the same term in a different patent with a different specification or prosecution history.” *Medrad, Inc. v. MRI Devices Corp.*, 401 F.3d 1313, 1318 (Fed. Cir. 2005).

b. Next, Sprint incorrectly asserts that its expert testimony was “unrebutted.” Br. 45. In fact, a countervailing declaration from Dr. Forsys was in the record. As he showed—using patents cited by Sprint’s own expert—“the phrase ‘processing system’ did not and does *not* have a fixed meaning in the telecommunications industry.” A1383. Indeed, the district court expressly relied on Forsys to find that “the limitation ‘processing system’ is used differently” throughout the art (A19)—a finding entitled to deference under *Teva*. Because these were “factual findings, based on expert testimony,” the “resolution of this case is straightfor-

ward”: Sprint demonstrates “no clear error in ... [these] factual findings, nor any error in the district court’s ultimate conclusion of indefiniteness.” *Eon*, 785 F.3d at 624 (affirming summary judgment of indefiniteness).

Wellman, Inc. v. Eastman Chemical Co., 642 F.3d 1355 (Fed. Cir. 2011) (Br. 41-42) does not compel a different conclusion. To begin with, that decision predates *Teva*, and thus reviewed factual findings “without deference.” *Id.* at 1365. In addition, the decision predates *Nautilus*—and thus applied the now-defunct standard that “[c]laims need not be plain on their face in order to avoid condemnation for indefiniteness; rather, claims must only be amenable to construction.” *Id.* at 1366. As Sprint admits, the standard today is much stricter, demanding “reasonable certainty.” Br. 23.

Moreover, the patentee in *Wellman* avoided indefiniteness for a temperature limitation by pointing to “published industry standards” that supplied the missing method of measurement. 642 F.3d at 1368. Here, by contrast, Wicker cites nothing—much less a “published industry standard[]”—that supplies the missing structure of Sprint’s “processing system.” At most, he cites examples of multiple other devices that could also be called “processing systems.” That does not satisfy even the permissive standard in *Wellman*: If “a person of skill in the art had to choose among ... different [processing systems], with each [one] influencing whether the

accused [networks] fell within the scope of the asserted claims,” then the claims would be “insolubly ambiguous, and hence indefinite.” *Id.* at 1368.

The district court was not persuaded by Wicker’s testimony that “processing system” had an established meaning in the art. A19. But accepting Wicker’s testimony over Forys’ would not change the ultimate result. Wicker’s definition of “processing system” is “a system that processes signaling to assist in call control.” Br. 42; A992. This amounts to saying that a “processing system” is “a system that processes,” and adds to that circular definition only the functional limitations of the claims—*i.e.*, “process[ing] signaling to assist in call control.” *E.g.*, A307 (’3,561 pat. cl. 1). As the district court put it, that so-called “definition” merely “describes the ‘processing system’ by its function.” A20. Thus, even if Wicker’s testimony had not been rebutted (and it was), it would only confirm that “processing system” is indefinite.

c. Sprint also says the district court erred by searching, in vain, for a definition of “processing system” in dictionaries on “computer science,” which Sprint calls “the wrong technical field.” Br. 45-46; A19. Nonsense. Sprint itself characterized the relevant art as a “computer-implemented field” (A1438-40); relies on an expert in “[c]omputer [e]ngineering” (Br. 13); asserts that its patents claim Internet-based networks (Br. 7-8, 26); and argued below that the claimed processing system “obviously has to be a computer device” (A1445). The notion that “com-

puter science” is “the wrong technical field” is specious. And “so long as the dictionary definition does not contradict any definition found in or ascertained by a reading of the patent documents”—here, there is none—the district court was “free to consult such resources at any time.” *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1584 n.6 (Fed. Cir. 1996).

Just as importantly, Sprint cannot be heard to complain that the district court went out of its way to understand a term that Sprint did not even try to define. At the *Markman* hearing, Sprint expressly disclaimed any “specific meaning of processing system,” admitting that “there probably are not” any “reasonable limits in the field to that processing system.” A1451. For that reason alone, the Court should reject Sprint’s belated (and waived) request for “judicial notice” (Br. 47 n.11) of a dictionary definition it failed to produce below. *See Sage Prods., Inc. v. Devon Indus., Inc.*, 126 F.3d 1420, 1426 (Fed. Cir. 1997) (“appellate courts do not consider a party’s new theories, lodged first on appeal”; “this court does not ‘review’ that which was not presented to the district court”).

At any rate, even now, Sprint cites no definition of “processing system.” The best Sprint can muster is a definition of a different phrase—“call processing”—which refers *not* to the claimed “processing system” itself, but to one of its *functions*. Br. 47. Thus, even importing Sprint’s definition into the claims, “[call] pro-

cessing system” remains a placeholder for structure (“system”) modified only by a description of its function (“[call] processing”). It is indefinite.

C. Sprint’s belated attempt to claim the benefits of § 112(f) without accepting its burdens fails as a matter of law and fact.

Unable to show that “processing system” has any definite meaning on its face, Sprint turns to the specifications to supply the structural content lacking in its claims. In so doing, Sprint attempts to walk away from the arguments that it made below. Further, contrary to Congress’s mandate in § 112(f), Sprint attempts to do so without limiting the claims to the structures disclosed. Yet even resort to the specifications does not save these claims, as they disclose no structure for the “processing system,” which is described only by its functions.

1. Sprint’s recourse to the specifications as a source of structural content for the “processing system” limitations is an argument that was not only waived, but affirmatively disclaimed below.

Sprint now relies on “columns and columns” of allegedly structural disclosures in its patents to fill in the contours of the claimed “processing system,” none of which appears in Sprint’s briefs or expert declarations below. Br. 35; *see* Br. 29-36; A955-1009. On the contrary, Sprint affirmatively argued that the claims were *not* properly construed under § 112(f), and that they were not limited by the “processing systems” nominally disclosed in the specifications. A20 n.9. Because Sprint made clear that it “did not intend to invoke interpretation of “[processing

system]’ under § 112[f],” the Court is “not required to import structure from the Specification into the claim.” *Ex parte Miyazaki*, 89 U.S.P.Q. 2d 1207, 1215-16 (B.P.A.I. 2008) (precedential). Thus, “the claim element ‘[processing system]’ is a purely functional recitation in that there is no structure presented in the claim element itself,” “[n]or is there any evidence that one of ordinary skill in the art could understand such a term to have a definite structural meaning.” *Id.*

Indeed, at the *Markman* hearing below, Sprint vigorously argued that the “processing system” limitation encompasses any “device that sits in a network that is programmed to do what is claimed.” A1448. Apart from acknowledging that “no one is going to argue that you could perform the functions that are recited in your head,” Sprint insisted that, “as a practical matter, there probably are not” any “reasonable limits” to what a “processing system” could be. A1451.

This Court affirmed an indefiniteness ruling based on nearly identical admissions in *Blackboard, Inc. v. Desire2Learn Inc.*, 574 F.3d 1371 (Fed. Cir. 2009). Much like Sprint here, “Blackboard [n]ever suggested that the [disclosed] ‘access control manager’ represents a particular structure defined other than as any structure that performs the recited function.” *Id.* at 1383. “In fact, before the district court, counsel for Blackboard defined the term ‘access control manager’ in precisely those terms”: “‘The access control manager manages access control.’” *Id.* “In other words, the access control manager, according to Blackboard, is any comput-

er-related device or program that performs the function of access control.” *Id.* That was fatal. Because “Blackboard ha[d] attempted to capture any possible means” for performing the claimed function, this Court “affirm[ed] the district court’s decision that [the] claims ... are invalid as indefinite.” *Id.* at 1385-86.

Sprint’s admissions here warrant the same result. Indeed, Sprint cannot escape its counsel’s statements at the *Markman* hearing, which are “the party’s own statement in ... [a] representative capacity.” Fed. R. Evid. 801(d). It follows that “any fact, bearing upon the issues involved, admitted by counsel, may be the ground of the court’s procedure equally as if established by the clearest proof.” *Phila. Reinsurance Corp. v. Emp’rs Ins. of Wausau*, 61 F. App’x 816, 819 (3d Cir. 2003) (quoting *Oscanyan v. Arms Co.*, 103 U.S. 261, 263 (1880)). Simply put, what Sprint’s “counsel admitted ... in open court” is now “binding on [Sprint] as a judicial admission,” and Sprint is not at liberty to retract it on appeal. *Mathelier v. Att’y Gen. of U.S.*, 388 F. App’x 216, 218 (3d Cir. 2010).

2. Even if evaluated under § 112(f), the claims remain indefinite because the specifications disclose nothing beyond a general-purpose computer to perform the claimed functions.

Even setting aside Sprint’s waiver and affirmative disclaimer of any reliance on § 112(f), Sprint’s specifications fall far short of that provision’s requirements.

a. First, as Sprint explains, the “Control specification mirrors the context of the claims and confirms that the processing system receives, processes, and trans-

mits signaling” (Br. 29)—*i.e.*, the processing system’s claimed functions. Indeed, we know that the processing system “*functions* to physically connect incoming links from other devices”; “*is functional* to accept signals ... and transfer the signals”; and otherwise “performs many functions.” Br. 31-32 (quoting A303 (14:16-27)) (emphasis added). Likewise, the ATM Interworking “specification also mirrors the claims by discussing similar call processing *functions*.” Br. 33 (emphasis added) (citing A407 (4:26-33)). Over and over, functions are nested within functions. But when one peels back the last layer of the onion, nothing has revealed the underlying structure that performs those functions.

By Sprint’s lights, the fact that its patents recite *multiple* functions for the “processing system” somehow diminishes the requirement to disclose its structure. Sprint gets it exactly backwards: “Where there are multiple claimed functions, ... the patentee must disclose adequate corresponding structure to perform *all* of the claimed functions.” *Media Rights*, 800 F.3d at 1374. Yet “[n]othing in the written description ... adds sufficiently to the meaning of the [‘processing system’] term’s structure; it only describes the term’s function and interaction with other parts in the system.” *Id.* at 1373. In other words, descriptions of what the “processing system” *does* shed no light on what it *is*.

b. Second, Sprint recites numerous components that supposedly could be assembled to form a “processing system.” Br. 30-32, 34-35. At best, however,

these disclosures merely explain “what structural subcomponents might comprise the ‘[processing system],’” which “cannot ... provide sufficient structure for the ‘[processing system]’ term” itself. *Media Rights*, 800 F.3d at 1373. Indeed, “[t]he written description only depicts and describes how what is referred to as the ‘[processing system]’ is connected to various parts of the system, how the ‘[processing system]’ functions, and the potential ... functional components of the ‘[processing system].’” *Id.* at 1372. “None of these passages, however, define ‘[processing system]’ in specific structural terms.” *Id.* at 1372-73.

Take Sprint’s lead passage about the “CCP” (the “processing system” in the Control Patents’ specification): It tells us that “[t]he CCP is a processing system, and as such, those skilled in the art are aware that such systems can be housed in a single device or distributed among several devices.” Br. 30. But learning that a “processing system” is a “CCP,” which in turn is a “processing system” that “can be ... housed in a device,” provides no additional understanding of what structure is claimed. The same goes for the CCP’s functionally described “processors” and “translators” (Br. 30-31)—substructures that themselves are never structurally described, and only exacerbate the problem. Sprint’s patents are like a matryoshka doll: One keeps removing the outer dolls, hoping to find something different—here, some identifiable structure—only to find more of the same.

That problem is repeated in the ATM Interworking Patents' specification. Although the specification explains that the "processing system may include any number of known telecommunications structures" (Br. 34), the specification fails to recite the key element that purportedly distinguishes the invention from what was already known—the overarching structure that operationally connects these known components to achieve the claimed "call processing capability." A387 (25:25). Sprint's patents thus epitomize "the vice of a functional claim," where "the inventor is painstaking when he recites what has already been seen, and then uses conveniently functional language at the exact point of novelty." *Wabash*, 304 U.S. at 371.

c. Third, Sprint points to general-purpose computers called out in the specifications as potential "processing systems"—in the Control Patents, "a Tandem CLX machine"; and in the ATM Interworking Patents, a "SPARC station 20." Br. 32, 36 (citing A303 (13:28-52), A411 (12:52-56)). According to Sprint, these "well-known devices" "easily satisfy the requirements of Section 112(f)." Br. 57. Sprint is incorrect.

"In cases involving a computer-implemented invention ... , this court has consistently required that the structure disclosed in the specification be more than simply a general purpose computer or microprocessor." *Aristocrat*, 521 F.3d at 1333. "Because general purpose computers can be programmed to perform very

different tasks in very different ways, simply disclosing a computer as the structure designated to perform a particular function does not limit the scope of the claim ... as required by” § 112(f)—it amounts to “pure functional claiming.” *Id.* Rather, for “computer-implemented functions,” § 112(f) “require[s] that the specification disclose an *algorithm* for performing the claimed function.” *Media Rights*, 800 F.3d at 1374 (emphasis added). In short, if “the only disclosed structure is a general purpose computer ... [and] the specification fails to disclose an algorithm for performing the claimed function,” the claim is “invalid.” *Net MoneyIN, Inc. v. VeriSign, Inc.*, 545 F.3d 1359, 1367 (Fed. Cir. 2008).

Thus, Sprint’s disclosure of general-purpose computers—whether a “Tandem CLX” or “SPARC station 20”—does nothing to remedy the deficiency of Sprint’s functionally described “processing system.” And critically, Sprint does not (and cannot) contend that its specifications contain algorithms for performing the claimed functions. Instead, Sprint cites “logical diagrams” and “flow charts” that merely depict where the processing system sits in the network. Br. 32, 57. But as this Court has made clear, those generic disclosures are no substitute for a specific algorithm: “Simply disclosing a black box that performs the recited function ... is not a sufficient explanation of the algorithm.” *Augme Techs., Inc. v. Yahoo! Inc.*, 755 F.3d 1326, 1338 (Fed. Cir. 2014); *accord ePlus, Inc. v. Lawson Software, Inc.*, 700 F.3d 509, 518 (Fed. Cir. 2012) (holding that the term “means

for processing” was indefinite where the specification included “just a black box that represents the [claimed processing] *function* without any mention of a corresponding structure”); *Function Media*, 708 F.3d at 1318-19 (“FM’s citation to the flow charts as sufficient structure is similarly unavailing because the charts also do not describe how the transmitting function is performed.”).

Nor can Sprint rely on the “narrow” exception to the algorithm requirement for “functions that can be achieved by any general purpose computer without special programming.” *Eon*, 785 F.3d at 621 (quotation and alteration omitted). As Sprint admitted below, a general-purpose computer would require “specialized software” to perform the steps claimed here. A1446-47. “And by claiming a processor programmed to perform a specialized function without disclosing the internal structure of that processor in the form of an algorithm, [Sprint’s] claims exhibit the overbreadth inherent in open-ended functional claims.” *Katz*, 639 F.3d at 1315 (quotation omitted); *see also Hand Held Prods., Inc. v. Amazon.com*, 2014 WL 5779416, *2 (D. Del. Nov. 5, 2014) (holding that the term “processing means,” without more, was indefinite where “it [wa]s clear ... that a particular function requiring special programming [wa]s implicated”).

Sprint’s *only* response to the algorithm rule below was that there was “no authority” for invalidating a method claim “for failure to disclose an algorithm.” A1449 (hearing); *see also* A947-48 (briefing). Yet that is exactly what *Media*

Rights did. 800 F.3d at 1368, 1375 (invalidating “[a] method of ... [a]ctivating a compliance mechanism” where the specification “fails to disclose any ... algorithm”). This is an open-and-shut case under *Media Rights*.³

d. In the end, the best that Sprint can do is regurgitate the many functions described in its patents that the claimed “processing system” must perform. “But that is not a description of structure; what the patent calls the ‘[processing system]’ is simply an abstraction that describes the function of controlling [and routing a call], which is performed by some undefined component of the system. The [‘processing system’] is essentially a black box that performs a recited function. But how it does so is left undisclosed.” *Blackboard*, 574 F.3d at 1383.

Despite all this, Sprint insists that “[t]he District Court’s indefiniteness ruling would have been reversible error under this Court’s means-plus-function jurisprudence” because it “agreed that there was physical structure disclosed in the specifications.” Br. 56 (quoting A18). Sprint misses the point. While the court identified putative “physical structures identified as the ‘processing system,’” it

³ Sprint not only fails to cite *Media Rights*, but fails to cite any relevant law in discussing the specifications, instead relying on cases that did not involve functionally claimed structures (Br. 28-29, 36)—*Nautilus III* (“in spaced relationship”) and *Young v. Lumenis, Inc.*, 492 F.3d 1336, 1346 (Fed. Cir. 2007) (applying pre-*Nautilus* standard to hold that “the term ‘near’ is not insolubly ambiguous and does not depart from the ordinary and customary meaning of ... ‘close to or at’”). And this is so despite the fact that Cox has repeatedly relied on *Aristocrat*, *Augme*, *Katz*, and other relevant cases in prior briefing. *E.g.*, A716, A724.

correctly found that they are merely “functionally described by the claims and in the specification,” and thus “do not pass muster under *Nautilus* as a person of ordinary skill in the art is not provided with the bounds of the claimed invention.” A18-19. That analysis was proper under § 112(b), and equally supports affirmance under § 112(f). *See Datascope Corp. v. SMEC, Inc.*, 879 F.2d 820, 822 n.1 (Fed. Cir. 1989) (“Appellees always have the right to assert alternative grounds for affirming the judgment that are supported by the record.”).

3. Even if the specifications described the structure missing from the claims, “processing system” would need to be limited to the structure disclosed.

Sprint admits that it “did not avail itself of the *benefits* of Section 112(f) through the convenience of means-plus-function ... claim drafting.” Br. 55. Yet Sprint appears to believe that it can do so now—by resorting to allegedly structural disclosures in the specifications—without also taking on “the *burden* of 112(f) ... to point to specific ‘physical structures’ in the intrinsic evidence that correspond to the claimed ‘processing system.’” *Id.* Sprint is wrong.

As we have shown, the district court correctly concluded that the specifications fail to provide the necessary structure for Sprint’s claimed “processing system,” and the claims are invalid as indefinite. But even if the Court were to conclude that (1) the district court somehow erred; (2) Sprint did not waive any reliance on § 112(f); *and* (3) the specifications disclose sufficient structure, the claims

would at least need to “be limited” to “the corresponding structure ... described in the specification” that Sprint now relies on (*Robert Bosch*, 769 F.3d at 1101)—namely, the external “CCP” in the Control Patents and “CCM” in the ATM Inter-working Patents. Br. 56-57. At a minimum, that “price ... must be paid.” *Med. Instrumentation*, 344 F.3d at 1211 (quotation omitted).

CONCLUSION

The district court’s judgment that Sprint’s “processing system” claims are invalid as indefinite should be affirmed.

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CERTIFICATE OF SERVICE

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**CERTIFICATE OF COMPLIANCE
WITH TYPE-VOLUME LIMITATION, TYPEFACE
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1. This brief complies with the type-volume limitation of Federal Rule of Appellate Procedure 32(a)(7)(B) because it contains 12,078 words, excluding the parts of the brief exempted by Federal Rule of Appellate Procedure 32(a)(7)(B)(iii) and Federal Circuit Rule 32(b).

2. This brief complies with the typeface requirements of Federal Rule of Appellate Procedure 32(a)(5) and the type style requirements of Federal Rule of Appellate Procedure 32(a)(6) because this brief has been prepared in 14-point Times New Roman, a proportionally spaced typeface, using Microsoft Word 2010.

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